Your buzzword of the day:

provisioning (n.) The process of providing users with access to data and technology resources.

What are our requirements?

- Low barrier to entry, even (maybe especially) for people who aren't in PHENIX, or even have an RCF account

- Possibility of disconnected operation – for development, remote user analysis, cloud computing

- Low manpower need for development, validation across multiple platforms, bringing new users up to speed

- Pathway to using large computing resources with a minimum of reconfiguration and revalidation

How do you provision an sPHENIX computer?

- Could be a clearly written recipe
  - many parts (OS, compilers, syslibs, ROOT, etc)
  - lots of potential for user confusion and error
- Could be an automated setup/config script
  - reduces potential for user error
  - leaves open question of supported systems
  - future obligation to support many systems

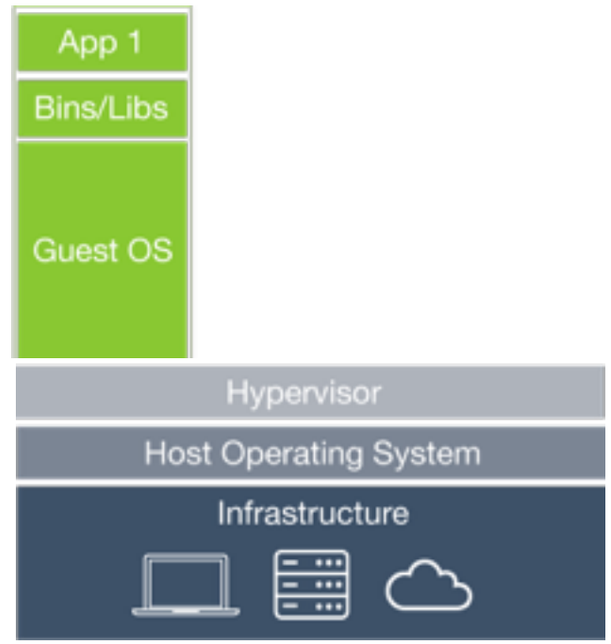
How do you provision an sPHENIX computer?

- Different approach – distribute an image of a virtual machine with an sPHENIX standard environment

- No matter what your Host OS is (Linux, Mac, Windows) you run the exact same virtualized OS as everyone else

- We have to validate the software on one system, everyone else is guaranteed

- Questions of performance and cost



What replaces AFS?

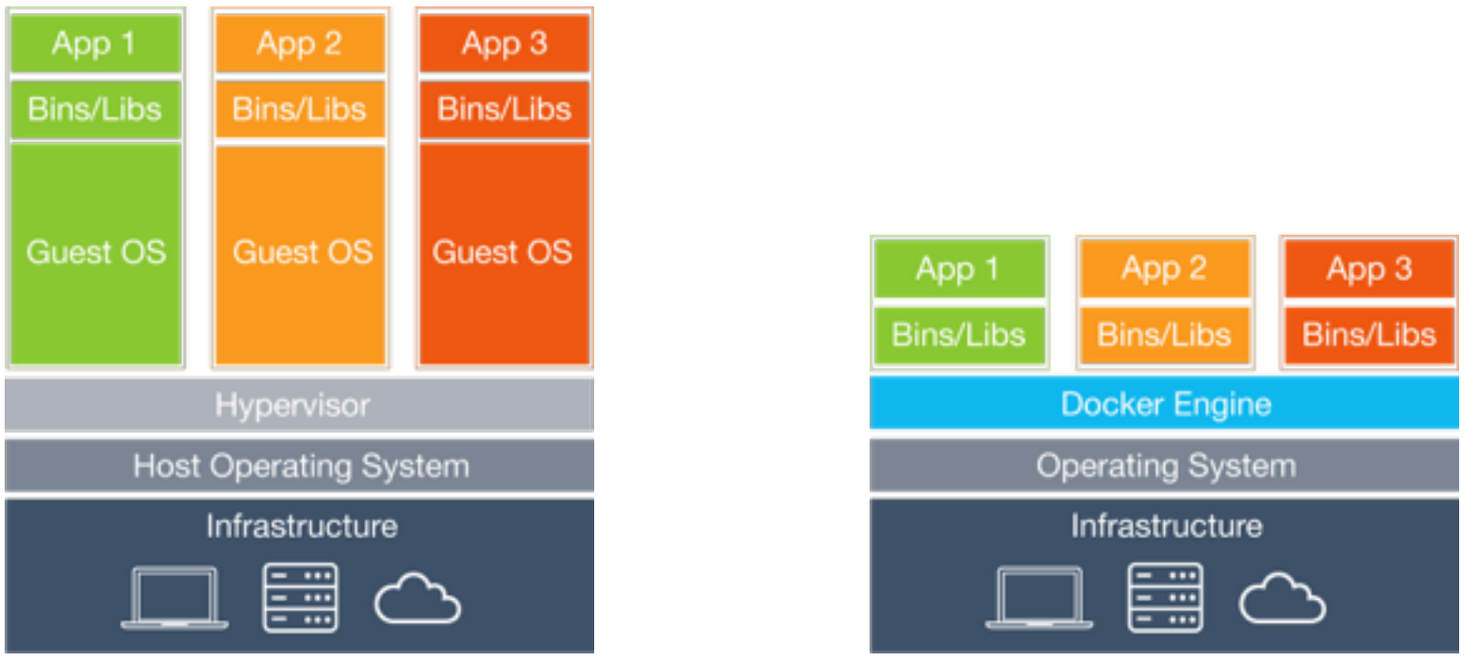
- You need a way to distribute libraries, binaries and (maybe) conditions data over the WAN

- We use AFS in a r/w manner, but the w is largely for interaction with CVS

- Seems like everyone is going with CVMFS (CernVM-FS), it's a r/o WAN filesystem over http with caching

http://cernvm.cern.ch/portal/

Virtual machine **versus** containers



Virtual machine **and** containers